

Power of Test: Box M's Test Versus Jennrich's Test

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ABSTRACT

The stability of covariance structure is a major issue in multivariate statistical process control. We learn from the literature, there are many statistical tests that have been developed to test that stability. The most popular and widely used tests are Box M's test (M-test) and Jennrich's test (J-test). In this paper, we focus on the performance of both tests. For that purpose, the power of test of both tests will be derived and analyzed. A simulation study will be presented to illustrate the performance of the both tests.

KEYWORDS: Power of test; Box M's test; Jennrich's test